

**Notice of Allowability****Application No.**

09/886,659

**Examiner**

KRISTIE D. SHINGLES

**Applicant(s)**

BROWN, DAVID A.

**Art Unit**

2448

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/21/2010.
2. ☒ The allowed claim(s) is/are 26-56.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 10/15/10, 11/16/10
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 12/17/10.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

/Kristie D. Shingles/  
Primary Examiner, Art Unit 2448

## **DETAILED ACTION**

### **Response to Amendments**

Claims 1-25 have been cancelled.  
Claims 27-31, 33-37, 39-43 and 45-49 have been amended.  
Claims 50-56 have been newly added.  
Claims 26-56 are pending.

### **Per Examiner's Amendments**

Claims 32 and 38 have been amended.

Claims 26-56 are allowed.

### **Response to Arguments**

I. In view of Applicant's arguments (see Remarks pages 9-10 filed 10/21/2010) with respect to claims 26-49, the arguments have been fully considered and are persuasive. The finality and rejections of the above claims has therefore been withdrawn.

### **Terminal Disclaimer**

II. The terminal disclaimer filed on 3/7/2010 disclaiming the terminal portion of any patent granted on this application has been reviewed and is approved. The terminal disclaimer has been recorded.

### **Examiner's Amendment**

**III.** An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Matthew Philips on 12/18/2010.

**Claim 32 (Amended).** An apparatus comprising:

a memory storing data;

a forwarding engine configured to search the data for a first initial search result using at least a first portion of a first key, wherein the forwarding engine is configured to return a route index if the first initial search result is a route index corresponding to the first key, and wherein the forwarding engine is configured to perform an iterative search if the first initial search result is a subtree index, wherein the iterative search comprises: searching the data for an iterative search result based on a subsequent key comprising the subtree index found in a preceding search and at least a next portion of the first key; and if the iterative search result is a route index corresponding to the first key, then returning the route index; and if the iterative search result is a subtree index, then performing the iterative search again.

**Claim 38 (Amended).** An apparatus comprising:

a memory storing data;

means for searching the data for a first initial search result using at least a first portion of a first key, wherein said means is configured to return a route index if the first initial search result is a route index corresponding to the first key, and wherein said means is configured to perform an iterative search if the first initial search result is a subtree index, wherein the iterative search comprises: searching the data for an iterative search result based on a subsequent key comprising the subtree index found in a preceding search and at least a next portion of the first key; and if the iterative search result is a route index corresponding to the first key, then returning the route index; and if the iterative search result is a subtree index, then performing the iterative search again.

#### **Reasons for Allowance**

**IV.** This communication warrants no Examiner's reason for allowance, as Applicant's reply filed on 12/2/2009 and 10/21/2010 filed makes evident the reason for allowance, satisfying the record as whole as required by rule 37 CFR 1.104 (e). In this case, the substance of Applicant's comments in the Remarks filed on 12/2/2009 and 10/21/2010 with respect to the claimed limitations of "searching...for an iterative search result using a subsequent key comprising the subtree index found in a preceding search...and at least a next portion of a first key" sufficiently present the reasons claims are patentable over the prior art of record. Thus, the reason for allowance is in all probability evident from the record and no statement of an Examiner's reason for allowance is necessary (see MPEP 13202.14).

The claimed invention, as supported by pages in the Specification, is not specifically disclosed or remotely suggested in the prior art of record. A review of Claims

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26-56 in view of the Examiner's remarks above, indicates that Claims 26-56 are allowable over the prior art of record.

**V.** Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### **Conclusion**

**VI.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to KRISTIE D. SHINGLES whose telephone number is (571)272-3888. The examiner can normally be reached on Monday-Friday 9:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Kristie D. Shingles/**

Primary Examiner, Art Unit 2448